1:Spier E-5 (1929-1932) 1933 NT15 River Yumans NT15
Maricopa

horse to make decorative spots.) Both the fruit and the plant were called kălyă'p, "flat," for the flat leaf-like stems. 824

Yucca baccata grew in the desert to the north. The banana-like fruit was eaten fresh; also stored by splitting and drying. Plant and fruit were ĭtcakwa'tc. 222 [251]

Some stems and leaves of plants were eaten. A plant growing in the mountains (hence called ȧvi', "mountain") looked like asparagus and was bitter. The stems were roasted in ashes. A little plant, called mŭckwo', was washed and boiled. When tender this was squeezed out between the hands and eaten with salt. The leaves of ȧgwa'vȧ, probably pigweed, larger than spinach leaves, were boiled and eaten with salt. This was gathered in the fall. 252

Mescal, the agave plant (maðĭ'l), was not much eaten because it did not grow in this locality. A few plants grew on the higher parts of the mountains to the south and more plentifully beyond in that direction. It was gathered by men because it grew too far away for the women to go. Most that they used was brought from the Papago country in cooked form. The growing plant was severed from its root by the customary chisel (n,ĭmtakĭ't or maðil,yĭmtȧkĭ'tĭc, "mescal–to cut off with"). This was a stick twenty inches long, two in diameter, flattened near one end to provide a chisel edge at one side. (The chisel edge was not at the end, as with other tribes.) This was held against the base of the mescal and hammered with a convenient stone or stick. The long leaves were trimmed short with a knife; the mescal hatchet of other tribes being unknown. One leaf was left long so that the heads might be tied in pairs, or they were fastened in pairs by a stick thrust through them. A man would bring home only six or eight, not a full load, because they were scarce. 222 [137] [262] [462] [439] 222 412

The mescal heads were baked in a pit. A fire was built in it, but the usual stones omitted. The coals were raked out, the ashes sprinkled a little, the heads laid on this, covered with dirt, then ashes and a little fire. If prepared late in the morning, they were allowed to bake all the following night. The short leaves remaining on the baked head were stripped off to be chopped up and mashed in a mortar. This mass was spread to dry on peeled 252

1:Spier E-5 (1929-1932) 1933 NT15 River Yumans NT15
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241 arate patch at the same time as watermelons. The Maricopa and
[171] some of the Yumans of the lower Colorado planted seeds which grew wild locally. Here ĭkca'mac, a grass seed, alone was cultivated (see above).[11]

243 824 Six varieties or colors of corn were named: light red corn (daθi'cahwĭ't), dark red (daθi'caḳa'ḳ), white (daθi'cxama'l), yellow (daθi'cȧkwĕ's), blue (daθi'caxavȧcu'c), light pink (daθi'ckal,ă'p), and corn with streaked kernels (daθi'caʀuwa'). It was impossible to secure specimens of these, since they are said to be no longer cultivated, with the exception of a single small ear, which I am not sure was a local product. This is similar to the
[171] small ears grown by the Havasupai and known to them as Mohave corn.

243 Corn was planted in little holes scratched with a planting
[412] stick, five or six kernels together in a hole, at a depth of about six inches. It grew rapidly, pushing through the earth in three or four days. The grain was not previously prepared, as by soaking, but an old man creeping along would hold kernels in his mouth where they absorbed some moisture, but solely because he would not want to go back for seed. After the stalks came up, hills were hoed up around them with the same stick.

[614] Corn was the totem of the xavȧtca'c sib. Hence they would
243 say, as the first kernels were planted, "You [xavȧtca'c] are known
788 all over the world, are famous. Come up strong like that and feed everybody, so that no one will go hungry." I was also told that a man or woman of this sib would be got to repeat the formula, "Put me down in your field; bury me. I will be glad to come up."

412 The planting stick (i'ĭ'xamiĭ'ł or i'ĭ'n,ĭmȧxwĕ'lyĭc, "stick for digging") was of cottonwood, about four feet long, two and a half inches in diameter, and flattened chiselwise for twelve inches at the lower end. It lacked the footrest of the Zuñi. My informant insisted on several occasions that they did not have the side-

[177] [11] My informants maintained that modern cultivation has wholly wiped out this plant. Kroeber (*ibid.*, p. 736) mentions four normally wild plants cultivated by the Mohave, among them aksamta which may be the same plant.

1:Spier E-5 (1929-1932) 1933 NT15 River Yumans NT15
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scraper hoe of the Mohave,[22] but used the same planting stick as a shovel, cultivating while standing. 412

Corn was almost always prepared on the metate before it was used. If green the kernels were mashed; when dry they were thoroughly ground. It was almost always eaten in the form of mush. Green corn was mashed, wrapped in the husks, and either boiled or placed on a spot previously heated by the fire, covered further with husks, then ashes and a little fire until baked into a loaf. Green corn was sometimes lye-hulled: half-boiled, ashes added, and stirred until the hull came free of the kernel. It was also cut from the ears, mashed on the metate and boiled with salt. The flavor of roasted corn was preferred to boiled. Kernels of roasted corn were plucked from the ear with the thumb nail and the handful poured into the mouth. 252

Corn for storage was dried on the house roof and placed in the basket granary either on the ear or shelled. Sometimes ears were roasted on a pile of brush or coals and also dried on the roof. Or the kernels were removed to dry on a cloth. Roasted ears were not ordinarily prepared for storage, but if so, they too went into the granary. Dry corn might be soaked in water and gently pounded in a mortar to remove the hulls. 251 [252]

Wafer bread, corresponding to that of the Pueblos and Havasupai, was made, but instead of a stone gridle, a lenticular pottery plate (maθi'l) was used. This was about a foot in diameter, and less than half an inch thick (Pl. VI, *i*). It was made very hot on the coals, when the thin corn batter could be rapidly spread over its concave side to form immediately as a wafer-thin cake called havâri'k or maθi'lyâm. Corn of any color was used. This hot plate was in constant use in earlier days, since tortillas of parched wheat or seeds were made on it, the dough being patted out into cakes about the size of the hand. 252 415 [171]

Wheat, which displaced corn, was treated in much the same fashion. The ears were fastened in bundles of an inch diameter, roasted on coals, and thrown on the roof to dry. These were stored in large pots, and when wanted the grain was beaten out. 251

[22] *Ibid.*, p. 736.

1:Spier E-5 (1929-1932) 1933 NT15 River Yumans NT15
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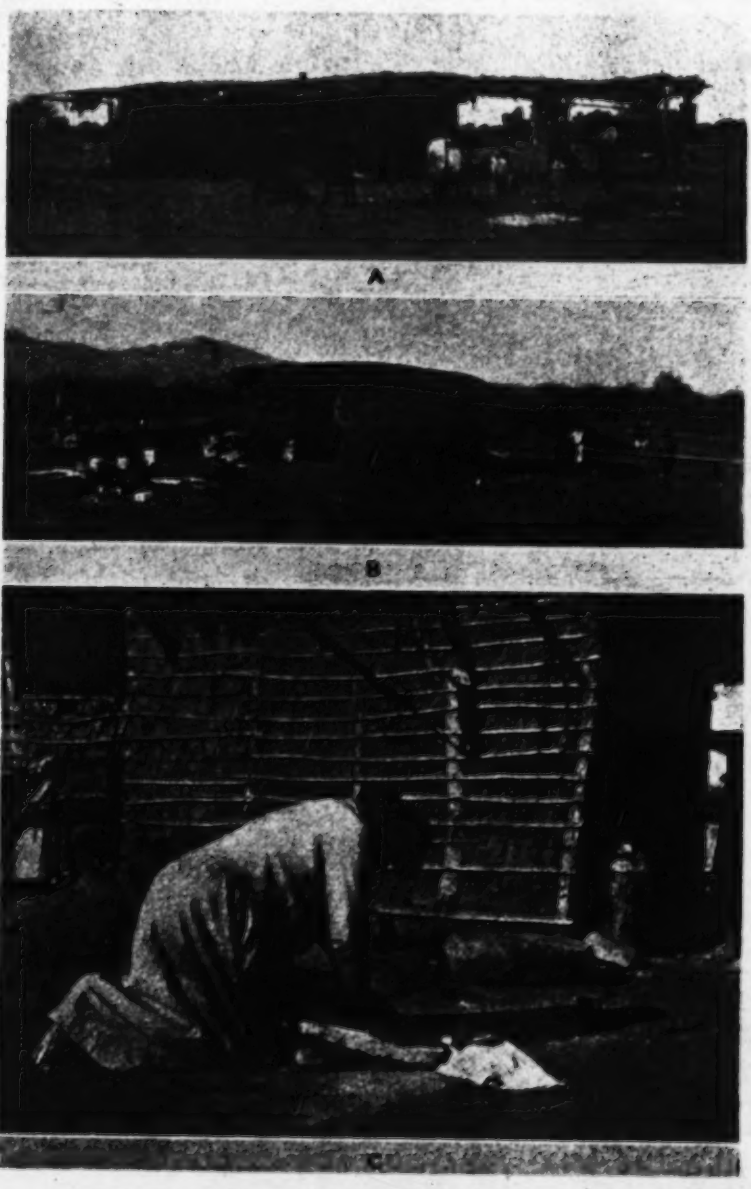
PLATE III

177
342



A

B

C

[252]
[516]
[412]

MODERN MARICOPA HOUSES AND WOMAN GRINDING

[p. 82 A]

1:Spier E-5 (1929-1932) 1933 NT15 River Yumans NT15
Maricopa

PLATE IV

227
291
412

DRESS AND FISHING BASKETS
(*a*, Man's breechclout of willowbark; *b*, woman's skirt; *c*, hairbrush; *d*, fisherman's basket; *e*, fishing scoop)

[FACING P. 95]

1:Spier E-5 (1929-1932) 1933 NT15 River Yumans NT15
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middle of the forehead, the back hair hanging to the nape, and earlocks hanging to the point of the jaw. When he was five or six, it was let grow, hanging free all around, and when he was fifteen or so, he began to form it in long braids behind. Small girls wore it trimmed short all over the head. Hair was always singed, never cut off.

The hair was frequently dressed with boiled black mesquite bark to make it glossy and presumably to rid it of vermin. The long back hair was twisted in a knot on the fore part of the crown and plastered with this concoction, which when dry looks like grey mud. This presumably is the "clay" of the early observers. This could be brushed out of the hair. Yucca root was not used for washing the hair as in the more northerly parts of the Southwest; in fact, the plant was said not to grow south of the mountains occupied by the Yavapai.

The hairbrush was a bundle of stiff fibers bent at their middles and bound together. The fresh roots of a tall grass (ŏxtci', which is also the name of the hairbrush or any brush) were laid side by side, bound for some distance at the middle, bent in two, bound again, and the ends trimmed. The inner bark of willow or mesquite was used for binding since these, being sticky, held the fibers tightly. Such brushes were five or six inches long. The open loop of these brushes (Pl. IV, *c*) was quite characteristic.

A well-dressed man wore eagle down attached by a short string to his back hair. In default of down, an eagle feather was used. An old man who saw a little boy without this adornment would be perturbed and would scurry about until he had procured it for the lad. Last Star thought there must have been some special significance to wearing this, but did not know what it might be. Of course, eagle feathers had first to be purified by a shaman (one who dreamed of the eagle or buzzard) before they might be worn.

Hats were not worn, nor, in all probability, did many men wear headbands. A feather bonnet (kapu'ʀ)[19] was sometimes worn by men to signify the wearer's bravery. This was a hood of

[19] Doubtfully from Spanish *capucha*, *capota;* compare Havasupai pŭt, "hat," "headband," kăpŭ'dĭvă, "wearing a hat."

1:Spier E-5 (1929-1932) 1933 NT15 River Yumans NT15
Maricopa

The rectangular baskets with lids in twilled, plaited weave and the sleeping mats made by the Pima[19] were not among Maricopa products. 285

VARIOUS TECHNIQUES AND TOOLS

Skin dressing.—Hides seem to have been but little used, not so much because deer and fur-bearing animals were rare, or that they were indifferent hunters, but because few articles were made of dressed skin. Correlatively the skin dressing process was rudimentary. Here again their habits coincide with the lower Colorado tribes. The upland tribes of Arizona were proficient workers in skins, those of the Colorado-Gila lowlands were not. 281 [171]

The uses of hides were few: the only uses cited were thongs, quiver, and shield. Rawhide sandals have come into use since cattle were obtained. [177]

A deer carcass was flayed by slitting down the belly from the neck, cutting along the inside of each leg, leaving the hoofs, but taking the head skin.

To tan the hide (k'wĭl,â), the flesh side was spread with parched seeds of the giant cactus fruit (the residue after a drink was made from it) and the skin folded with the flesh side in. This was to absorb the grease (?). When opportunity came to work the skin, it was first soaked in water. It was then slung over a smooth slanting pole and the flesh side scraped with a sharpened stick, not a stone. The hair was probably removed with a split bone scraper. The hide was then pounded with a stone while lying folded on a flat rock, available only in the mountains. When it was soft, it was further worked by rubbing with the hands. My informant had heard that deer brains were sometimes used for tanning. Pumpkin seeds were not used, as by the Cocopa, nor were skins smoked or dyed. Skins were also tanned with the hair on: fox, coyote, wolf, and mountain lion. (There were no bears in Maricopa territory.) Skin dressing (k'wĭ'ltamavĭstcu'm, "hide softening") was the work of men alone. [412] [136] [462]

Willow bark blankets may have been made, but it is very doubtful. Kutox described these, called xacĭl,ĕ'p, as made by 286

[19] Russell, *op. cit.*, pp. 93, 134, 145, 147.

1:Spier E-5 (1929-1932) 1933 NT15 River Yumans NT15
Maricopa

The strongest were of mescal fiber. Bundles of the dried leaves of this plant were brought home, pounded, the connective tissue shaken out, and the fibers rolled into rope.

Head rings (kwĭcko') were used by women to support pots and other articles carried on the head. In earlier days, these were made of the inner bark of the willow; now they are simply bound rolls of old cloth. The neighboring Pima and Papago similarly use rings of willow bark and less commonly plaited of agave (mescal) leaf,[33] but it is unlikely that the Maricopa made the latter.

Metates and mortars.—These were the principal utensils for the preparation of meals. A man must not even lay his hands on them: if he were discovered using them, he would be ridiculed as a berdache. Metates were used somewhat more than mortars even in the old days when mesquite, which required pounding in the mortar, was the primary food.

The metate was a flat slab, roughly rectangular, with one prepared face used for grinding with a hand stone or mano. The metate was of a granite-like stone; the mano of a hard, close-grained sandstone. They were considered very valuable since it required a long time to work these tough stones into shape and they were constantly needed for household tasks. Both were formed by pecking with any convenient pointed boulder. Like the Pima, stone axes found in nearby ruins were also used to dress them. One small metate seen was roughly twenty-one inches long by fourteen inches wide and two inches thick. It was perfectly flat transversely, but, on its working surface, slightly concave longitudinally. The mano in use with this was as long as the metate was wide, and had a width such as to be conveniently grasped (fifteen inches long; five and a half inches wide; two inches thick). It was of rectangular cross-section, slightly convex in a longitudinal direction on top, with a true flat surface on the bottom (i.e., the grinding surface) which rose at an angle near each end.

When the metate was to be used, the woman knelt behind it.

[33] Russell, *Pima Indians*, p. 113; Kissell, *Basketry of the Papago and Pima*, p. 159.

1:Spier E-5 (1929-1932) 1933 NT15 River Yumans NT15
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412 A pestle or other convenient stone was placed under the near end to raise it (Pl. III, *C*). A cloth was spread under the far end to catch the ground meal: the unground grain was in a basket by the side. The mano was grasped with the hands to that the fingers were over the forward edge, the thumbs over the rear. It was moved to and fro, perfectly flat for most of its stroke, but rocked, i.e., the near edge raised, at the end of the stroke toward the body to catch more grain under it. It was not rocked transversely to the metate. This motion accounts for the flat, longitudinally concave surface of the metate. When the surface became too smooth to catch the grain, it was roughened by pecking with a fragment of hard stone. They usually turned the slab face down resting on the mano when it was not in use.

Mortars were wooden. These were sections of cottonwood or mesquite logs burned to length and with a hollow burned in the end or, less commonly, in the side. Those of mesquite were said to have been as large as the cottonwood mortars; being of a much harder wood, they were more highly prized. Those that had the hollow in the upper end were sunk into the ground half a foot or so to prevent their tipping over. These measured up to sixteen inches in diameter, eighteen or twenty inches in length: one collected[24] was twelve inches in diameter with a rounded cavity in one end, nine inches across by half that depth. The pestle in use with these wooden mortars was a more or less cylindrical water-worn boulder, ten to sixteen inches in length. If the lower end was too flat, it was pecked into a proper rounded form. Infrequently stone mortars were manufactured for pulverizing mesquite and the like, but not for pigments. These were perhaps six inches in diameter, four to five high, and of a tough stone.

[484] When camping while gathering mesquite at a distance, such bulky mortars could not be taken along. Other devices were employed. A hole, six to eight inches in diameter, was dug, carefully cleaned and sprinkled. A few hands full of mesquite pounded in the hole were sufficient to line it with fragments that adhered to the wet soil. The wooden pestle used in this was four to

[24] Washington State Museum, No. 2-11867.

1:Spier E-5 (1929-1932) 1933 NT15 River Yumans NT15
Maricopa

six inches in diameter and breast-high, which the women used, of course, while standing. A less temporary device was a travelling mortar made of arrowweeds fastened in conical form (Pl. XIV, *C*).[25] A large number of peeled arrowweeds were fastened to a hoop at the mouth by twined willow bark strips. Their lower ends were pointed so that they might be bound closely together. The specimen made for me was about twenty-four inches tall, its mouth diameter about eighteen. This was set into the ground so as to stand upright. A mass of cottonwood bark jammed into the apex was soon transformed into a solid mass by the sticky mesquite. Other arrowweeds tied around the outside with willow bark prevented fragments slipping through. Again the pestle was a breast-high pole. Bed rock mortars, like those of southern California, were unknown, for the simple reason that there is no bed rock nor large boulders in the valley. Further, they dared not pound while camping in the mountains because that would announce their position to the enemy. All preparation involving pounding they tended to before they set out.

The metate was called axpĕ'; the wooden mortar, xamo". Curiously the names for mano and pestle are derived from that of the mortar: xamocĭ' and xamok,e'r respectively. In Havasupai also the names for mano and pestle are identical (va'ha'dja"a) but differ from that for mortar.[26] The travelling mortar was isa'-vâxamo', "arrowweed mortar"; its pestle, ana'lxamuke'c, "mesquite pestle."

The *fire drill* was the simple palm drill. The hearth was made of the inner wood of the giant cactus, flattened, and provided with an indefinite number of pits on the upper face with notches to correspond cut into the side. In place of giant cactus, a cottonwood limb might be used. The drill was a peeled, straightened arrowweed some fifteen to eighteen inches long and a quarter-inch in diameter. The composite drill, used by the Navaho, was unknown here. The hearth was held by the feet while drilling. For tinder, dry rotted bark of any kind or old manure was

[25] No. 2-11863.

[26] Spier, *Havasupai Ethnography*, p. 114.

1:Spier E-5 (1929-1932) 1933 NT15 River Yumans NT15
Maricopa

used. They did not make short travelling sets, like the Havasupai. The drill was called aun,ĭmĭk,ai′ or a′au′giă′m, "fire shooter"; the hearth had no name; tinder was hanâv^{a}su′t.

A strike-a-light (augwĭnyata′vâ, "fire striker") was used when travelling; striking flint against quartz. A rolled cotton cord was carried for tinder in a hollow cow horn. The use of the strike-a-light and this tinder horn was said to be ancient but I am dubious. For one thing, I was told the horn was anciently that of a mountain sheep, but it is clear that they would not use the horn of this animal under any circumstances. The slow-match for carrying fire was unknown.[27]

Of *stone knives* (^{a}xâkwĭ′, n,ĭxakwĭ′, ^{a}viru′v^{a}, ḳwarâo′) all that is known is that these were made of dark obsidian (kwalacau′) found near the Salt River, where it was rare. This may have been flint rather than obsidian, because it was said also to have been used for striking fire. The informant knew nothing of their handles, nor if the blade was set in the side of the handle scalpel-wise.

Stone axes were not made, and those found in nearby ruins were used primarily to dress metates to shape.

Ladles were made of wood as well as clay. Wooden ladles may always have been of mesquite which is sufficiently dense to carve nicely. Several seen had small circular bowls, conical below; another an elliptical bowl, rounded below; both having long straight handles in the plane of the bowl (Pl. XIV, *a*, *b*).[28] These were about a foot to sixteen inches in length. I am inclined to agree with Russell that wooden ladles, at least those with conical bowls, were a recent acquisition. He states that they were derived from the Mexicans through the Papago.[29] The ladle with the conical bowl is certainly like old European forms. Woodworking was little developed: wooden bowls were not made.

[27] But Garcés' Halchidhoma travelling companion in June 1774 "carried a firebrand in one hand all the way [Ehrenberg to Agua Caliente], and it did not go out" (Bolton, *Anza's California Expeditions*, II, 387). Since it was summer, this must have been for the purpose of starting camp fires, not the torch carried for warmth by other lower Colorado Yumans.

[28] Washington State Museum, Nos. 2–11872 (or 73) and 2–11871, respectively.

[29] *Pima Indians*, p. 101.

The *mush stirrer* (cu.ŭ'n) was simply three or four arrowweeds, dressed and held by loose twining at the handle end. Their lower ends were then trimmed off even (Pl. XIV, *d*).[29] 415

A *broom* (n,imama'l) was simply a large bundle of arrowweeds bound at one end. [412]

Temporary cups and bowls were sometimes fashioned by hollowing out small barrel cacti when travelling.

The *rabbit net* (ca'a'k) was a purse net set in the runway. It was about a yard square. A stout cord threaded through all four edges was attached to a stake. The rabbit dashing into the net, spread open on the bushes, pursed it and was held fast by the stake. The cordage for the net was rolled of the strings of black-eyed pea pods. The net was made on a loop foundation (at upper left corner, Pl. XI). Twenty-five or thirty meshes formed the first row: these tied together (?) were called an ear (smalk). No net gauge was used. 224 286 [283]

Flageolet.—This instrument was used in lovemaking, but not as an accompaniment to song. "A boy was certain to get a girl if he used it." It was a large reed, up to two feet in length, so chosen that it was formed of two internodal sections with a single node or septum between, both ends then being open. Small holes were made on each side of the node so that it could be pierced, perhaps slotted between these holes. In addition, four finger holes were made near the distal end of the flageolet. To play it, one blew into the open proximal end which was held between the lips; the forefinger of the left hand partially covered the holes at the node to serve as a reed, while the fingers of the other hand lay on the holes near the distal end. The instrument was called w'ilw'i'l or less properly taltal. 534 [832]

WEAPONS

Armament for the Maricopa consisted of bows, short wooden clubs, and small circular shields. A special pike was carried by the battle leader alone; rarely other men armed themselves with simple wooden pikes. Armor, pole-length clubs, and stone headed clubs, all used in this area, were unknown. The Maricopa 411

[29] No. 2-11874.

2:Bartlett G-5 (1850-1853) 1854
NT15 River Yumans NT15
Pima NM29

RY
584 as his means will permit, to compensate them for the loss of their daughter, whose services are to them a matter of consequence.

RY
[534]

Indian Flute, and Rattle of Deer's Hoofs.

RY
P
462
[171] Among both the Coco-Maricopas and the Pimos, the women do the principal part of the work. Besides taking care of the children and attending to the household matters, they grind the corn, make baskets, gather mezquit beans, help till the ground, and sometimes spin and weave.

The men plant and gather the crops, and take care of the animals. This I believe is all they do; and as
RY
P the performance of these duties is not a very onerous task, they are idle the greater portion of the time. Their
412
177 implements of husbandry are steel hoes and axes which they obtain from the Mexicans, harrows, and occasionally a long-handled spade. Grinding corn on the *metates*, or stones, is a work of great labor, and comes hard on the poor women, who are obliged to get upon their knees, and exert the whole strength of their arms

/82 cont./

000 cooking pots of many sizes.

From the Pima they also learned to weave cloth from
291 native cotton. The dress of the women formerly consisted of a
[177] piece of this cloth wound around the body under the arms and reaching to the knees, with an outer shawl for cold weather.
[302] The men wore only the breech-cloth, but painted their bodies elaborately.

The Maricopa, of course, possessed the same wealth of
262 native vegetal and animal foods as the Pima, and employed the same methods of gathering and treating them. The fruit of the giant cactus, found in unlimited quantities, is still one of their important staples. This strange creation of the plant world blooms in early spring and ripens its fruit in June and July. Using a long
[222] pole with a wooden blade at the end, the women cut the fruit from the plant and carry it to the settlements in large baskets. The
[252] fruit is eaten fresh, dried, made into jelly, or preserved. They
273 also make quantities of wine from it, first boiling the fruit, then draining the juice into large jars, which are kept in a heated house for a week to ferment. A number of women, sometimes twenty-
[476] five or more, formerly joined in making wine, and when it was
[574] ready their neighbors were invited to a great feast, which always ended in a debauch. This deplorable custom, along with many of a commendable nature, was derived from the Pima.

241 The Maricopa are a sedentary, agricultural people. The
[252] principal crop of their small irrigated farms is wheat, which they
[412] grind into coarse flour on the metate, or hand mealing stone.

/83/ 582 The little that remains of their former social organization indicates that it was identical with that of the Mohave. Nothing could be learned tending to show that under this system marriage within recognized groups of kindred was prohibited. The union
584 was without ceremony, and formal consent of the parents was not necessary; if they did not send the young man away, it was assumed that they were willing to accept him as a son-in-law.

[764] As among other Yuman tribes, the dead are burned. Within
765 a few days after the cremation of the body of an important man a mourning ceremony, called Nyimich, is observed. Fuel is heaped up to form a pyre, on which are placed pieces of clothing of each of the near relatives of the deceased. The men march around the pyre shouting and crying, followed by the women carrying